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STATISTICAL ANALYSIS OF 1940 4-H CLUB DATA

By

Laurel Sabrosky
Assistant Extension Analyst
and
Barnard Joy
Senior Agriculturist

Division of Field Studies and Training

Measure of evaluation	Ten high States	Ten low States	United States average
1. Number of members per county extension agent	374	114	220
a. Percentage of agents' time devoted to 4-H and older-youth work	38	19	28
b. Members per year of time devoted to 4-H and older-youth work	1,311	477	774
2. Percentage of rural youth reached	74	21	46
a. Percentage of farm youth reached	100	42	64
b. Percentage of rural nonfarm youth reached	58	6	21
3. Percentage of completions	87	66	75
4. Percentage of reenrollment	70	52	63

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INTRODUCTION

This circular is the fifth of a series of annual reports of the statistical analysis of 4-H Club work in the United States^{1/}. The first one, issued in 1936, initiated the use of four statistical measures as a means of evaluating the progress of club work from year to year in the United States and in the individual States: Enrollment per county extension agent; percentage of eligible young people reached; percentage of members who complete their projects; and percentage of members who reenroll.

As has been explained in the previous circulars, any one of these four measures of club work does not give an adequate picture of the progress in a State or in the United States. All the measures have to be considered together to understand adequately the status of the work.

^{1/} Joy, Barnard. Statistical analysis of trends in 4-H Club work, with special reference to 1935. U. S. Dept. Agri. Ext. Serv. Cir. 247, August 1936.

Statistical measurements of 4-H Club work, with special reference to 1936. U. S. Dept. Agri. Ext. Serv. Cir. 270. October 1937.

25 years of 4-H Club work. Analysis of statistical trends (with special reference to 1938). U. S. Dept. Agri. Ext. Serv. Cir. 312. June 1939.

Joy, Barnard, and Sabrosky, Laurel. Statistical analysis of 4-H Club work, with special reference to 1939 and the work of county club agents. U. S. Dept. Agri. Ext. Serv. Cir. 345. October 1940.

DISTRIBUTION: A copy of this circular has been sent to each State extension director; State leader in county agricultural and home demonstration work; State leader and assistant State leader in 4-H Club work; extension editor; agricultural-college library; and experiment-station library.

4-H CLUB ENROLLMENT

In 1940, there were 1,420,297 boys and girls enrolled in 4-H Club work in the 48 States and Alaska, Hawaii, and Puerto Rico. This number was an increase of 2.8 percent over the 1939 enrollment of 1,381,595. There were 16 States which reported a decrease in enrollment, but the other 32 States and Alaska and Puerto Rico showed an increase (appendix, table 1). In addition to these 4-H Club members, there were 70,496 young people who were members of older-youth extension groups.

To carry on the work with these young people, as well as with adults, there were employed in the United States in 1940 an equivalent of 6,761 full-time county extension agents, an increase of 123 over 1939. In 1940 these county extension agents reported the amount of their time devoted to 4-H and older-youth work and the amount devoted to work with adults. These data make possible a more detailed analysis of the number of members enrolled per county extension agent.

ENROLLMENT PER COUNTY EXTENSION AGENT

Enrollment per county extension agent has not been a completely satisfactory measure of volume of club work in terms of extension time and budget. In some States part of the county workers are designated as club agents and spend almost all of their time on 4-H work. In other States, work with youth is carried on by the agricultural and home demonstration agents who devote only a portion of their time to 4-H work.

The average enrollment of 220 4-H Club and older-youth members per county extension agent is the total enrollment divided by the number of county extension agents (figure 1). For the country as a whole, agents devoted 28.48 percent of their time to 4-H and older-youth extension work in 1940. This is equivalent to 1,926 full-time workers. On a full-time basis the average enrollment per agent was 774.

A summary of the data from 1940 annual reports shows that the percentage of time devoted to 4-H and older-youth work varied among the States from a low of 14 to a high of 46 (figure 2 and appendix, table 2). The percentage of time devoted to youth work varied with type of agent. County agricultural agents devoted one-fifth of their time to youth work; home demonstration agents, one-third; and club agents, nine-tenths. In other words, an equivalent of 28 percent of the county extension staff in the United States worked with 4-H Club members and older youth in 1940.

The average number of 4-H Club members and older youth enrolled per year of county extension agents' time devoted to that work is shown in figure 3. The range among the States was from 238 to 1,656. The 8 States with enrollments of less than 500 per year of county extension time devoted to youth work might be compared to States in which the average number of pupils for each rural teacher was 11. In a similar manner the 6 States with enrollments of more than 1,350 per year of county extension time devoted to youth work might be compared to States having an average of 35 pupils per rural school teacher.

The number of members per county extension agent (figure 1) is a result of percentage of agents' time devoted to 4-H work and older youth and number of members per unit of time. For example, Illinois and West Virginia with 260 and 242 members respectively are both slightly above the National average of 220 members per county extension agent. In Illinois, agents devoted only 19 percent of their time to youth work but enrolled 1,364 members for each year of time devoted to youth work. In West Virginia, 39 percent of the time of agents was devoted to youth work, but the enrollment per year of time was only 581.

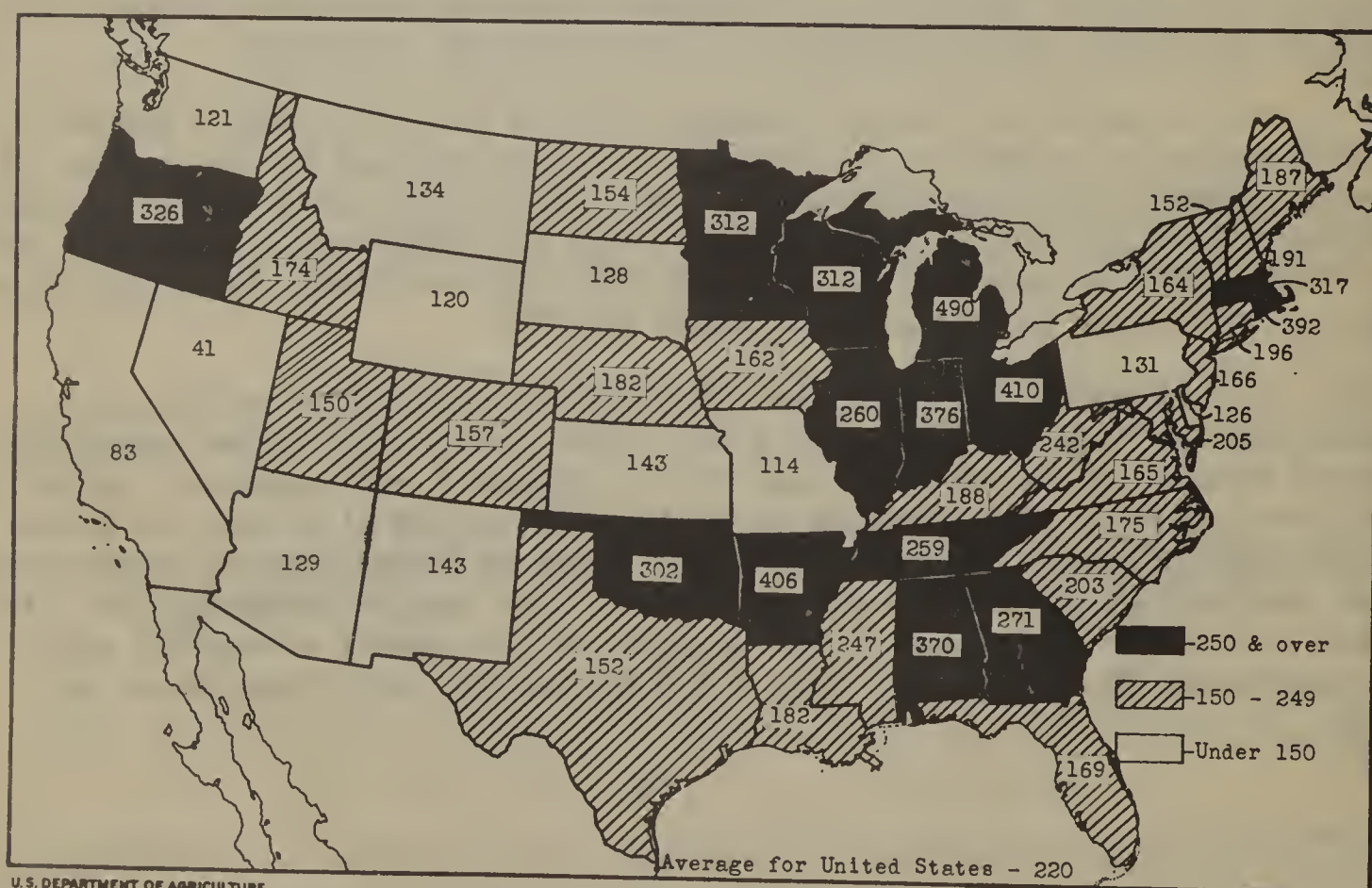


Figure 1.--Average number of 4-H Club members and older youth enrolled per county extension agent, 1940

Figure 2.--Percentage of county extension agents' time devoted to 4-H Club and older-youth work, 1940

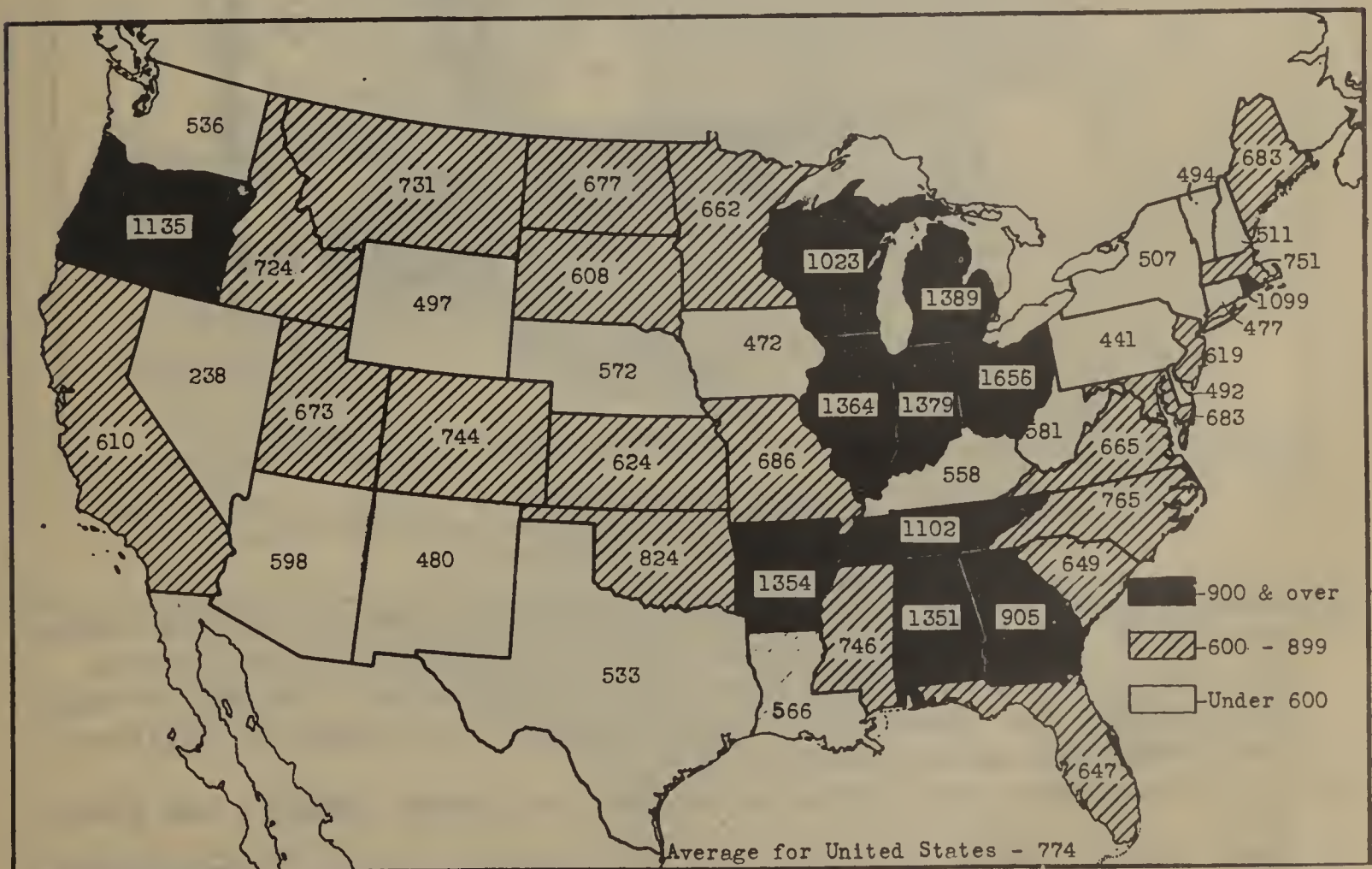
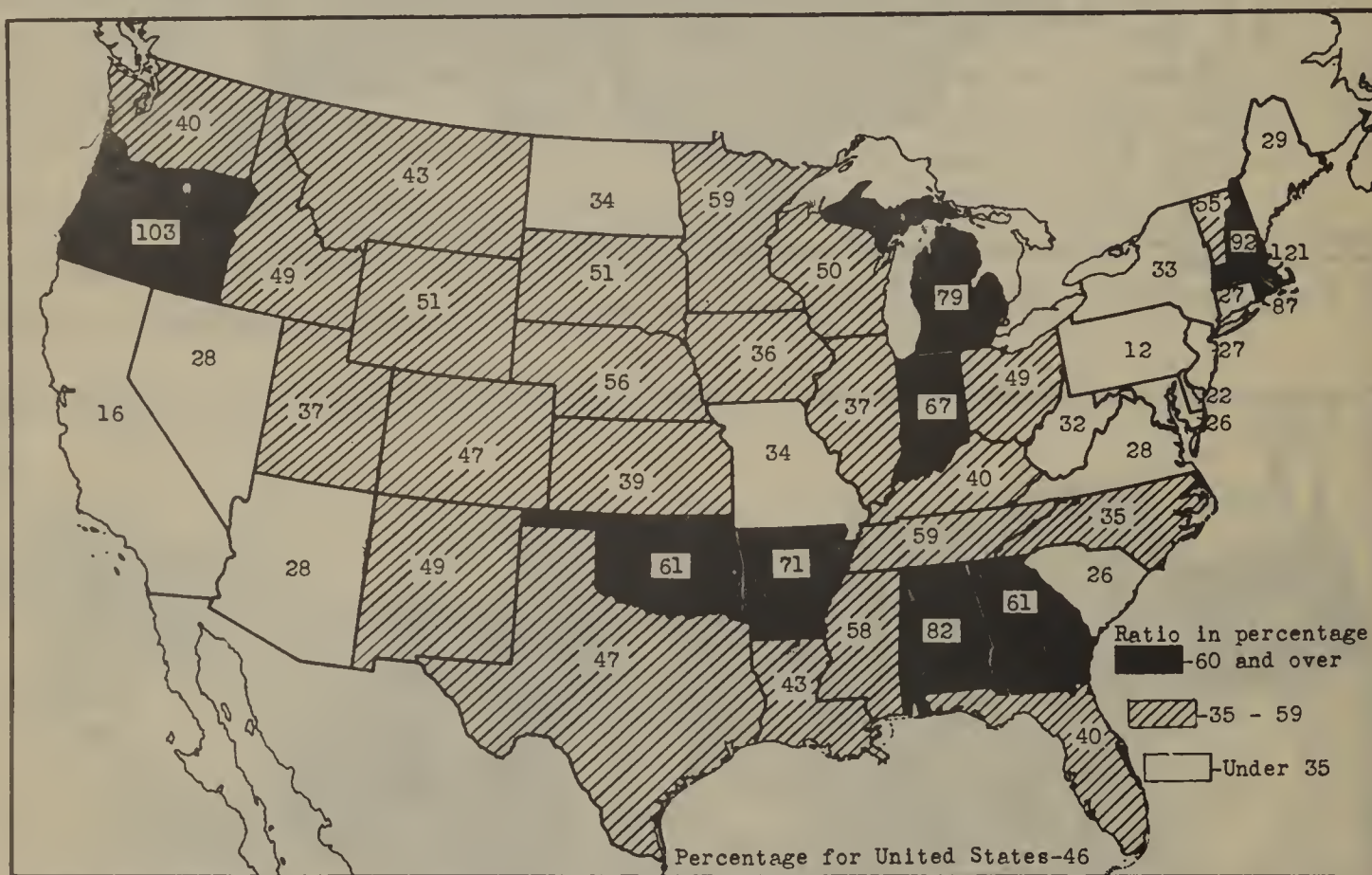


Figure 3.--Average number of older youth and 4-H Club members per year of county agents' time devoted to older-youth and 4-H Club work, 1940

BOYS AND GIRLS REACHED BY 4-H CLUB WORK

In 1940, there were approximately 1,180,000^{2/} rural boys and girls in the 48 States who reached the average 4-H starting age (appendix, table 3). During that year, 538,772^{3/} boys and girls enrolled in 4-H Club work for the first time. The ratio between these figures indicates that 4-H work is reaching 46 percent of rural youth (figure 4). This percentage is the same as it was in 1939. The number of new members decreased 12,568, but the 1940 Census indicates that the number of rural boys and girls has also decreased.

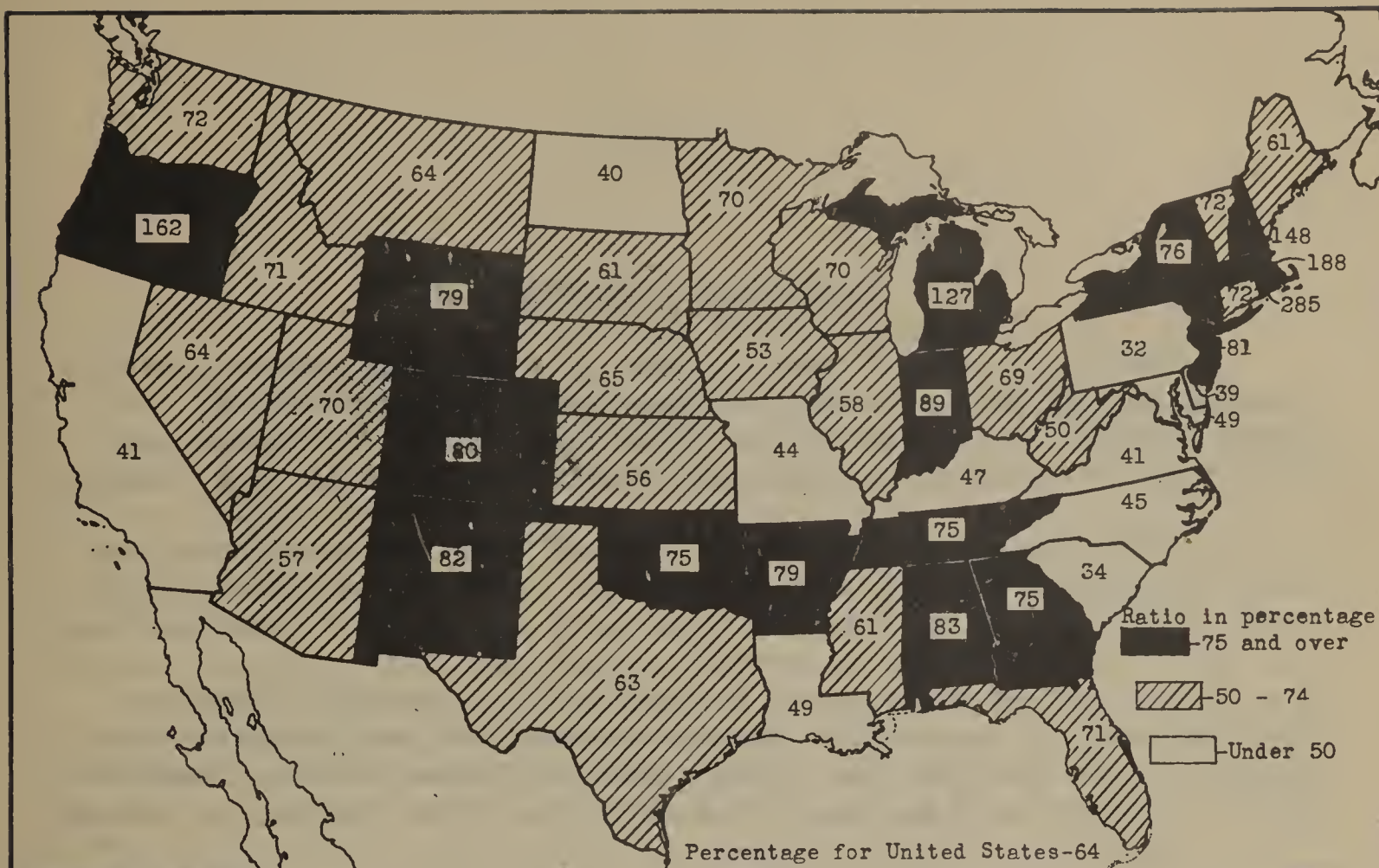
4-H Club work is reaching a greater percentage of farm youth (64 percent) than of rural nonfarm^{4/} youth (21 percent) (figures 5 and 6). In 1940, 10 States reached 60 percent or more of the rural youth, 32 reached 60 percent or more of the farm youth, and 3 reached at least that proportion of their rural nonfarm youth.



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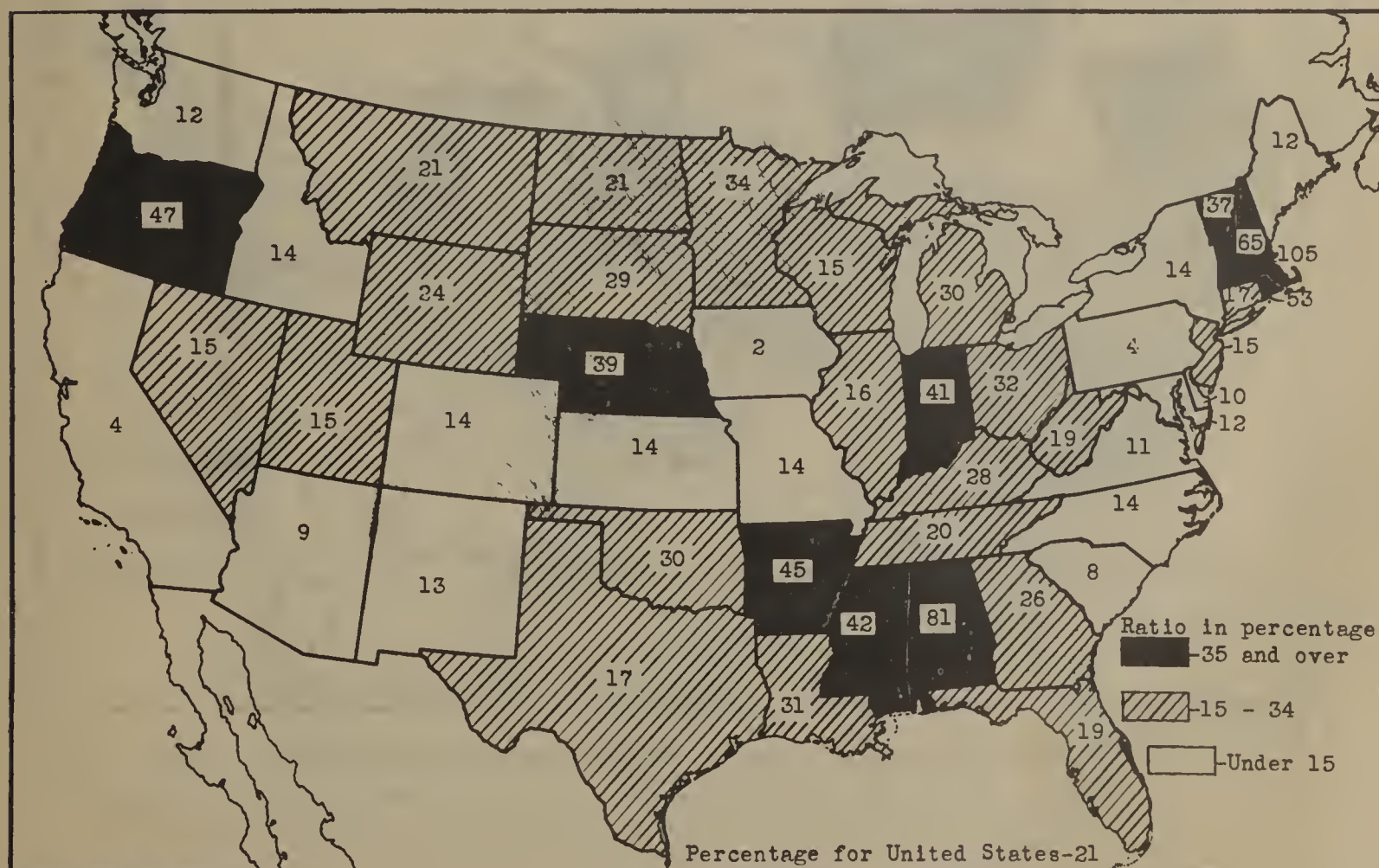
Figure 4.--Ratio of first-year 4-H Club members enrolled in 1940 to total number of rural (farm and nonfarm) boys and girls reaching 4-H starting age (one-fourth of those reported as 10-13 years of age in preliminary report of 1940 census)

- ^{2/} These figures are calculated from a preliminary report of 1940 census data based on a 5-percent sample. The final report of 1940 census data was not published when this report was written. To get the number reaching the "average 4-H starting age," the number of children 10-13 years of age was divided by 4.
- ^{3/} This figure does not include enrollment in Alaska, Hawaii, and Puerto Rico.
- ^{4/} Rural nonfarm youth are those residing outside cities or other incorporated places of 2,500 or more, but not living on farms.



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Figure 5.--Ratio of first-year 4-H Club members from farms enrolled in 1940 to total number of farm boys and girls reaching 4-H starting age (one-fourth of those reported as 10-13 years of age in preliminary report of 1940 census)



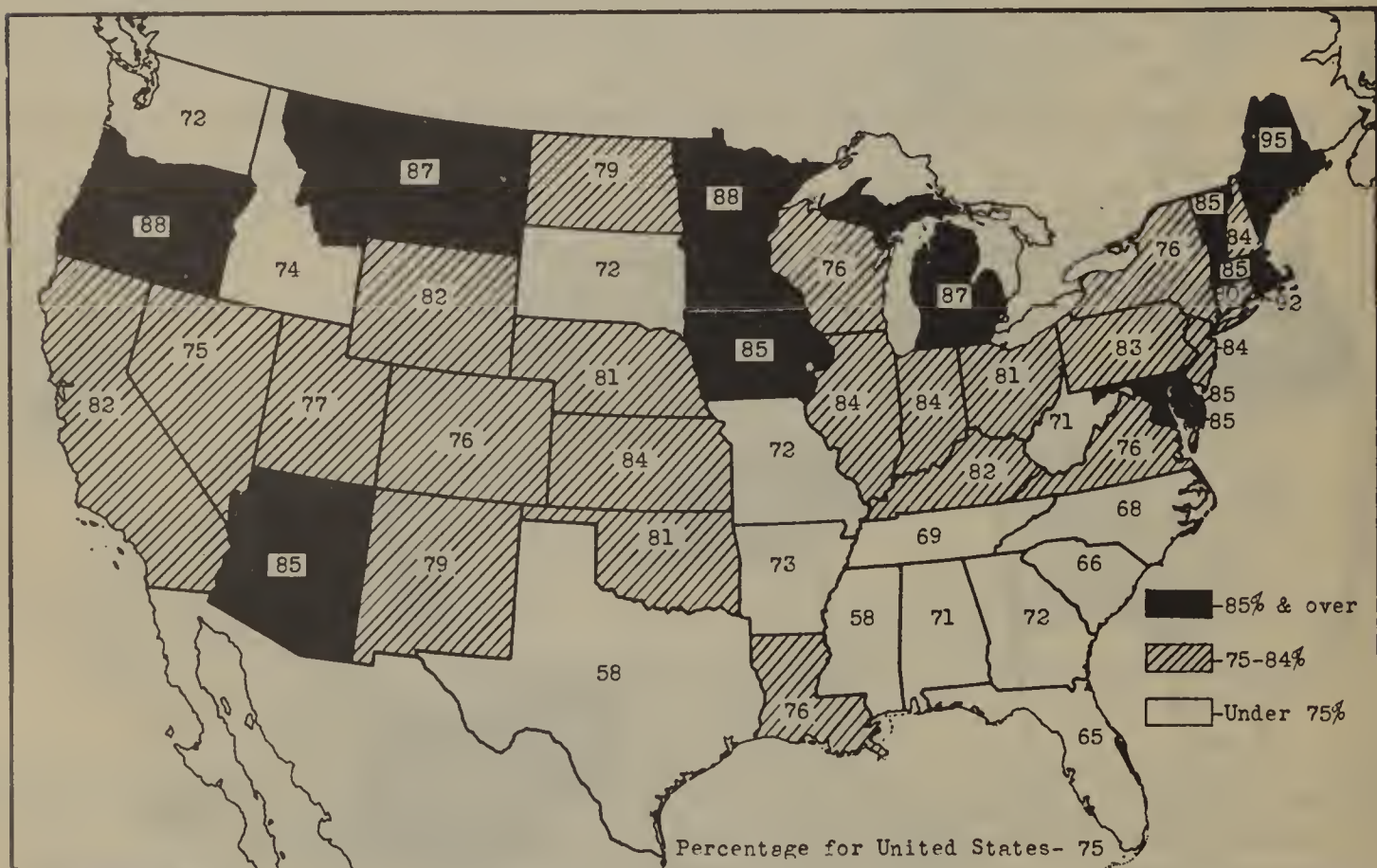
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Figure 6.--Ratio of first-year 4-H Club members from nonfarm homes in 1940 to total number of rural nonfarm boys and girls reaching 4-H starting age (one-fourth of those reported as 10-13 years of age in preliminary report of 1940 census)

PERCENTAGE OF COMPLETIONS

Completion of his project work by a 4-H Club member indicates success on the part of both the organization and the member. It means that at least some of the objectives of 4-H Club work have been reached and that reenrollment for further work is more likely.

There were 75.4 percent of the 4-H Club members in 1940 who completed their project work (figure 7). This was practically the same proportion as in 1939 (75.2 percent) and in 1938 (74.6 percent). In 1935, the percentage of members completing their projects was below 65 percent in 10 States. In 1940, all but 2 States reported that 65 percent or more of the members enrolled had completed the work outlined for the year. The number of States with at least 85 percent completions had increased from 8 to 12 in the 5-year period.



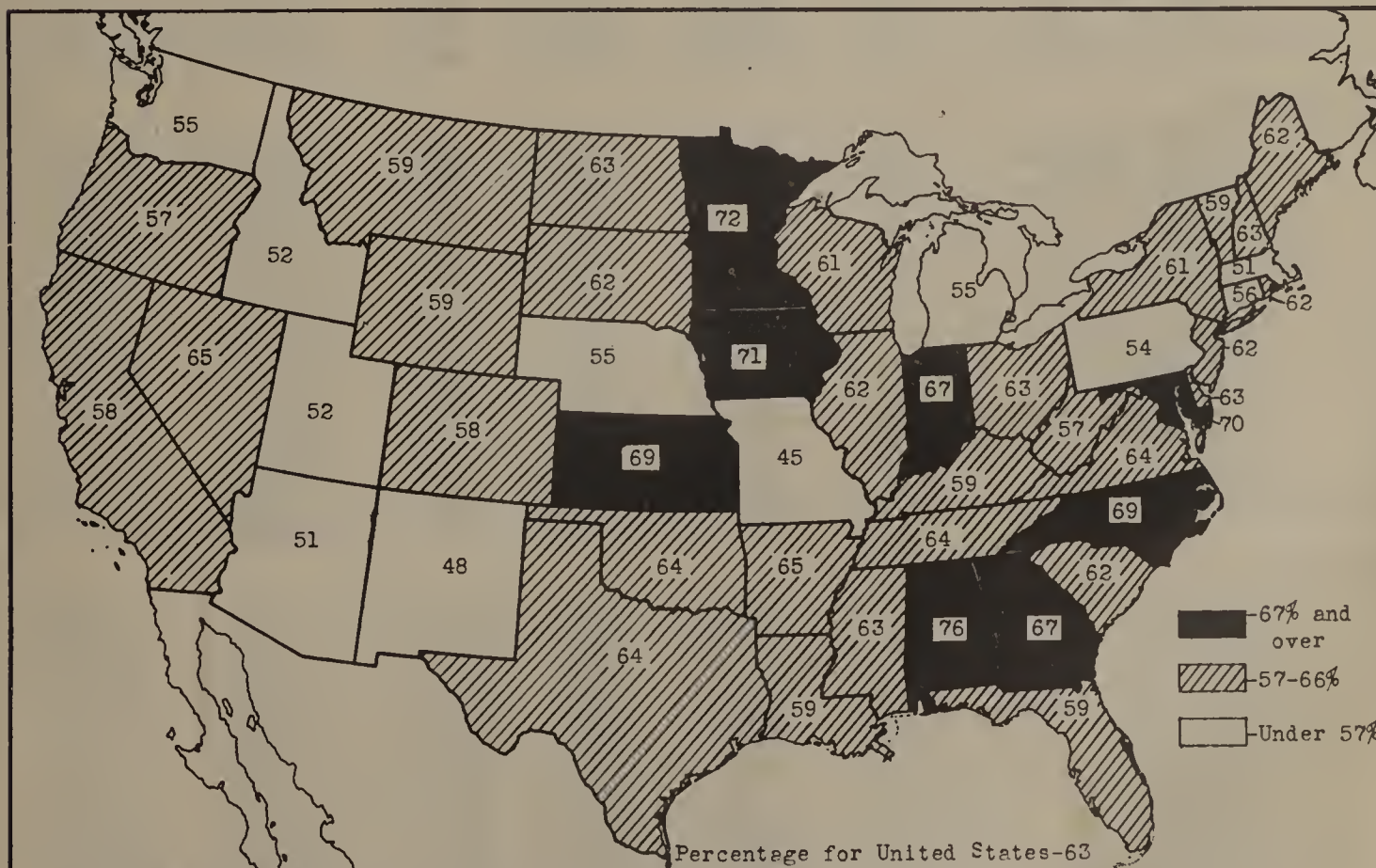
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Figure 7.--Percentage of 4-H Club members enrolled who completed their project work in 1940

REENROLLMENT OF 4-H MEMBERS

The length of time that 4-H members continue in the work is measured most simply by percentage of reenrollment. Of the 1,381,595 members enrolled in 1939, 876,794 enrolled again in 1940. This number is determined by subtracting the 543,503 new members from the total enrollment for 1940 of 1,420,297. The 63.5-percent reenrollment indicates that 4-H members continue in the work for an average of 2 $\frac{2}{3}$ years.

In 1935, the percentage of the 1934 membership who reenrolled was less than 50 in 10 States. In 1940, only 2 States had less than 50 percent reenrollment (figure 8) which is equivalent to an average length of membership of only 2 years. The number of States with more than two-thirds of their members reenrolling increased from 7 in 1935 to 8 in 1940. A reenrollment of 67 percent indicates that members continue in the work for an average of 3 years.



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Figure 8.--Percentage of 1939 4-H Club members who reenrolled in 1940

APPENDIX

Table 1.--1940 4-H Club data by States: Enrollment, reenrollments, completions

States	Enrollment: 1939	1939 members reenrolled: in 1940	Percentage: reenrolled	Total enrollment: 1940	Total com- pletions 1940	Percentage com- pletions
Eastern States:						
Maine	6,470	4,013	62.0	6,640	6,294	94.8
New Hampshire	7,137	4,477	62.7	7,581	6,398	84.4
Vermont	5,353	3,137	58.6	5,434	4,603	84.7
Massachusetts	18,993	9,646	50.8	19,039	16,191	85.0
Connecticut	6,390	3,608	56.5	6,453	5,162	80.0
Rhode Island	3,566	2,197	61.6	3,090	2,828	91.5
New York	31,052	18,967	61.1	31,935	24,137	75.6
Pennsylvania	19,417	10,490	54.0	18,659	15,442	82.8
New Jersey	9,888	6,167	62.4	9,684	8,147	84.1
Delaware	1,257	795	63.2	1,242	1,059	85.3
Maryland	10,652	7,506	70.5	11,110	9,453	85.1
West Virginia	22,623	12,888	57.0	23,336	16,666	71.4
Total Eastern States	142,798	83,891	58.7	144,203	116,380	80.7
Central States:						
Ohio	59,238	37,171	62.7	58,363	47,494	81.4
Indiana	53,375	35,711	66.9	55,195	46,168	83.6
Kentucky	40,997	24,205	59.0	42,169	34,456	81.7
Illinois	35,960	22,193	61.7	36,211	30,365	83.9
Michigan	51,315	28,387	55.3	55,767	48,705	87.3
Wisconsin	34,152	20,951	61.3	34,884	26,482	75.9
Minnesota	46,566	33,497	71.9	49,258	43,131	87.6
Iowa	26,927	19,201	71.3	28,866	24,426	84.6
Missouri	25,853	11,638	45.0	23,561	16,971	72.0
North Dakota	9,666	6,079	62.9	9,791	7,782	79.5
South Dakota	10,749	6,642	61.8	11,582	8,397	72.5
Nebraska	21,332	11,794	55.3	20,523	16,636	81.1
Kansas	22,962	15,840	69.0	23,460	19,814	84.5
Total Central States	439,092	273,309	62.2	449,630	370,827	82.5
Southern States:						
Virginia	38,715	24,874	64.2	35,636	27,185	76.3
North Carolina	49,066	33,941	69.2	55,632	37,854	68.0
South Carolina	33,550	20,940	62.4	29,899	19,796	66.2
Georgia	80,684	53,895	66.8	82,962	59,983	72.3
Florida	20,294	11,902	58.6	18,958	12,321	65.0
Alabama	100,058	76,440	76.4	115,193	81,870	71.1
Mississippi	64,427	40,354	62.6	64,379	37,215	57.8
Tennessee	66,927	43,018	64.3	68,017	46,637	68.6
Arkansas	74,949	49,012	65.4	74,043	54,231	73.2
Louisiana	32,790	19,456	59.3	33,190	25,177	75.9
Oklahoma	58,265	37,576	64.5	57,324	46,272	80.7
Texas	81,728	52,206	63.9	88,091	51,465	58.4
Puerto Rico	4,979	3,887	78.1	7,265	6,017	82.8
Total Southern States	706,432	467,501	66.2	730,589	506,023	69.3
Western States:						
Montana	8,535	5,024	58.9	8,176	7,099	86.8
Idaho	6,078	3,163	52.0	6,956	5,155	74.1
Wyoming	3,295	1,940	58.9	3,461	2,845	82.2
Colorado	10,108	5,842	57.8	10,958	8,313	75.9
Utah	5,873	3,081	52.5	5,290	4,053	76.6
Nevada	803	519	64.6	810	608	75.1
New Mexico	7,460	3,592	48.2	7,250	5,695	78.6
Arizona	2,763	1,420	51.4	3,207	2,725	85.0
California	11,982	6,905	57.6	12,287	10,023	81.6
Oregon	22,871	13,133	57.4	23,203	20,329	87.6
Washington	10,630	5,879	55.3	11,329	8,177	72.2
Hawaii	2,371	1,327	56.0	2,371	1,935	81.6
Alaska	504	268	53.2	577	376	65.2
Total Western States	93,273	52,093	55.9	95,875	77,333	80.7
GRAND TOTAL	1,381,595	876,794	63.5	1,420,297	1,070,563	75.4

Table 2.--1940 4-H Club data by States: Percentage of county extension agents' time devoted to 4-H Club and older-youth work and membership per year of such time

States	Number of county extension agents	Percentage of time devoted to 4-H and older-youth work				Equivalent: in no. of agents devoting full time to 4-H & older youth work	Total enrollment 4-H and older youth	Membership per agent year devoted to 4-H and older youth work
		Agricultural agents and assistants	Home demonstration agents & assistants	4-H Club agents and assistants	All county extension workers			
Eastern States:								
Maine	39	6.7	5.5	99.4	26.9	11	7,304	683
New Hampshire ..	43*	0.9	9.2	99.8	38.5	16	8,231	511
Vermont	39*	5.0	1.2	96.9	31.3	12	5,918	494
Massachusetts ..	62	2.1	1.0	99.3	40.9	26	19,648	751
Connecticut	36	0.4	0.4	98.6	43.4	15	7,068	477
Rhode Island ...	8*	-	-	100.0	35.2	3	3,133	1,099
New York	211	0.5	-	99.8	31.7	68	34,507	507
Pennsylvania ...	156	24.2	40.2	-	30.9	46	20,430	441
New Jersey	60	1.0	29.7	91.8	28.9	16	9,940	619
Delaware	11	-	-	100.0	29.3	3	1,382	492
Maryland	60	25.2	36.4	-	30.2	18	12,270	683
West Virginia ..	109	22.9	39.6	86.4	39.1	45	26,371	581
Total Eastern States:	834	12.3	21.1	97.4	33.6	279	156,202	559
Central States:								
Ohio	160	21.0	25.6	68.5	24.3	40	65,546	1,656
Indiana	161	26.4	28.4	-	27.0	44	60,601	1,379
Kentucky	232	26.8	37.4	61.9	33.6	78	43,717	558
Illinois	175	17.2	21.7	62.1	19.3	33	45,416	1,364
Michigan	118*	19.3	41.7	92.7	35.8	42	57,780	1,389
Wisconsin	115	23.3	45.1	62.3	30.4	35	35,871	1,023
Minnesota	165*	27.4	32.6	96.5	45.6	78	51,406	662
Iowa	194	18.3	35.9	70.4	34.1	67	31,483	472
Missouri	218*	12.7	23.3	-	16.5	36	24,768	686
North Dakota ...	65	17.6	44.6	-	22.5	15	10,021	677
South Dakota ...	94	20.0	33.5	-	22.7	20	11,999	608
Nebraska	118	30.6	36.1	-	31.8	38	21,459	572
Kansas	173*	16.5	26.0	91.5	22.4	40	24,803	624
Total Central States:	1,988	21.3	30.5	79.7	28.3	564	484,870	860
Southern States:								
Virginia	228	12.5	38.8	84.7	24.8	57	37,608	665
North Carolina ..	337	18.4	30.8	-	22.6	77	58,981	765
South Carolina ..	154	26.1	37.7	-	31.0	48	31,294	649
Georgia	316	22.6	41.8	100.0	29.8	94	85,537	905
Florida	117	13.0	43.7	-	25.3	31	19,779	647
Alabama	314	26.6	29.5	-	27.8	86	116,130	1,351
Mississippi	267	11.5	37.2	90.2	32.1	88	65,957	746
Tennessee	271	16.5	32.7	82.9	23.9	64	70,250	1,102
Arkansas	190	30.4	31.4	-	30.9	57	77,141	1,354
Louisiana	183	30.5	33.8	-	31.9	59	33,395	566
Oklahoma	191	37.8	37.8	-	37.8	70	57,657	824
Texas	593	26.0	30.6	-	27.9	169	90,058	533
Puerto Rico	87*	34.3	47.8	-	38.8	33	7,721	232
Total Southern States:	3,248	22.8	34.7	87.8	28.6	933	751,508	805
Western States:								
Montana	63	15.2	29.0	-	18.2	12	8,420	731
Idaho	40	21.4	12.3	90.7	24.6	10	6,964	724
Wyoming	29	23.3	27.4	-	24.3	7	3,491	497
Colorado	70	18.9	29.0	-	21.3	15	10,984	744
Utah	37	19.3	29.7	-	21.4	8	5,566	673
Nevada	21	13.6	19.4	60.9	20.3	4	853	238
New Mexico	52	26.2	37.0	-	29.3	15	7,430	480
Arizona	25*	15.7	35.8	-	21.8	5	3,228	598
California	152	13.8	15.3	-	14.1	21	12,618	610
Oregon	72	11.5	18.3	96.5	28.4	21	23,498	1,135
Washington	94	18.0	36.3	54.1	23.8	21	11,416	536
Hawaii	32	32.4	45.2	-	37.8	10	3,168	319
Alaska	4*	17.7	28.1	-	25.4	1	577	566
Total Western States:	691	17.7	28.1	85.9	22.2	149	98,213	658
GRAND TOTAL	6,761	20.7	31.6	88.9	28.5	1,926	1,490,793	774

* Number of county extension agents calculated by dividing total months of service reported by county extension agents and assistants by 12 to obtain number of agents on a yearly basis.

APPENDIX

Table 3.--1940 4-H Club data by States: Rural boys and girls reached by 4-H

State	New 4-H members 1940	Rural boys and girls reaching starting age*	Percentage of youth reached by 4-H work	Percentage of membership from farm homes	New members from farm homes in 1940	Farm boys and girls reaching 4-H start- ing age*	Percentage of farm youth reached by 4-H work
Eastern States:							
Maine	2,627	8,943	29.4	73.8	1,939	3,174	61.1
New Hampshire	3,104	3,390	91.6	51.8	1,608	1,084	148.4
Vermont	2,297	4,201	54.7	66.4	1,526	2,116	72.1
Massachusetts	9,393	7,751	121.2	30.0	2,814	1,498	187.9
Connecticut	2,845	10,415	27.3	49.9	1,420	1,984	71.6
Rhode Island	893	1,027	87.0	48.2	430	151	284.7
New York	12,968	38,914	33.3	71.3	9,245	12,241	75.5
Pennsylvania	8,169	69,069	11.8	76.0	6,212	19,345	32.1
New Jersey	3,517	12,830	27.4	54.8	1,929	2,390	80.7
Delaware	447	2,074	21.6	73.2	327	831	39.4
Maryland	3,604	13,996	25.8	70.7	2,547	5,192	49.0
West Virginia	10,448	32,615	32.0	64.7	6,762	13,526	50.0
Total Eastern States ...	60,312	205,225	29.4	61.8	37,249	63,532	58.6
Central States:							
Ohio	21,192	42,933	49.4	66.4	14,071	20,480	68.7
Indiana	19,484	28,916	67.4	72.7	14,161	15,957	88.7
Kentucky	17,964	44,384	40.5	76.7	13,777	29,550	46.6
Illinois	14,018	37,661	37.2	77.9	10,914	18,803	58.0
Michigan	27,380	34,592	79.2	81.3	22,246	17,568	126.6
Wisconsin	13,933	27,849	50.0	89.5	12,473	17,856	69.8
Minnesota	15,761	26,629	59.2	82.6	13,014	18,551	70.2
Iowa	9,665	26,954	35.9	98.1	9,485	17,911	53.0
Missouri	11,923	35,030	34.0	85.8	10,230	23,085	44.3
North Dakota	3,712	10,954	33.9	79.7	2,960	7,416	39.9
South Dakota	4,940	9,736	50.7	82.0	4,048	6,620	61.2
Nebraska	8,729	15,623	55.9	76.6	6,685	10,350	64.6
Kansas	7,620	19,467	39.1	85.8	6,539	11,770	55.6
Total Central States ...	176,321	360,728	48.9	79.1	139,505	215,917	64.6
Southern States:							
Virginia	10,762	38,640	27.9	83.0	8,932	21,926	40.7
North Carolina	21,691	61,890	35.0	87.7	19,023	42,375	44.9
South Carolina	8,959	34,230	26.2	90.0	8,061	23,515	34.3
Georgia	29,067	47,337	61.4	88.2	25,646	34,396	74.6
Florida	7,056	17,847	39.5	71.5	5,046	7,069	71.4
Alabama	38,753	47,242	82.0	72.6	28,150	34,081	82.6
Mississippi	24,025	41,234	58.3	88.2	21,190	34,564	61.3
Tennessee	24,999	42,326	59.1	89.7	22,412	29,703	75.5
Arkansas	25,031	35,293	70.9	85.6	21,437	27,296	78.5
Louisiana	13,734	31,999	42.9	75.2	10,328	21,099	48.9
Oklahoma	19,748	32,498	60.8	83.9	16,563	21,982	75.3
Texas	35,885	76,375	47.0	87.2	31,281	49,483	63.2
Puerto Rico	3,378	**	**	71.6	2,418	**	**
Total Southern States ...	263,088	506,911	51.2	83.6	220,047	347,489	62.6
Western States:							
Montana	3,152	7,273	43.3	76.4	2,407	3,769	63.9
Idaho	3,793	7,692	49.3	88.7	3,364	4,709	71.4
Wyoming	1,521	2,968	51.2	76.5	1,164	1,479	78.7
Colorado	5,116	10,826	47.3	85.3	4,365	5,487	79.6
Utah	2,209	5,936	37.2	76.8	1,696	2,407	70.5
Nevada	291	1,038	28.0	62.0	181	282	64.0
New Mexico	3,658	7,488	48.9	87.5	3,202	3,898	82.2
Arizona	1,787	6,383	28.0	80.3	1,435	2,497	57.5
California	5,382	32,965	16.3	85.9	4,622	11,400	40.5
Oregon	10,070	9,786	102.9	76.3	7,678	4,748	161.7
Washington	5,450	13,593	40.1	84.5	4,606	6,389	72.1
Hawaii	1,044	**	**	80.8	844	**	**
Alaska	309	**	**	31.8	98	**	**
Total Western States ...	43,782	105,948	40.0	81.7	35,748	47,065	73.9
GRAND TOTAL	543,503	1,178,812	45.7	79.8	433,878	674,003	63.9

* Calculated from a preliminary report of 1940 census data based on a 5 percent sample.

**No census data available.